

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(1.1) NUMBER OF SEQUENCES: 135

<210> (2) INFORMATION FOR SEQ ID NO: 1:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 60 base pairs
 <212> (B) TYPE: nucleic acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

CTCTGCACT TGGACCTGT CCATGGCCGG CTGGGCCGCA TAGAATGGAA
 CAACTAAGC

<210> (2) INFORMATION FOR SEQ ID NO: 2:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 92 amino acids
 <212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(1.1) MOLECULE TYPE: protein

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Met Ala Glu Glu Arg Pro Tyr Ala Cys Pro
 5 10
 Val Glu Ser Cys Asp Arg Arg Phe Ser Arg
 15 20
 Ser Asp Glu Leu Thr Arg His Ile Arg Ile
 25 30
 His Thr Gly Gln Lys Pro Phe Gln Cys Arg
 35 40
 Ile Cys Met Arg Asn Phe Ser Xaa Xaa Xaa
 45 50
 Xaa Leu Xaa Xaa His Xaa Arg Thr His Thr
 55 Xaa 60
 Gly Glu Lys Pro Phe Ala Cys Asp Ile Cys
 65 70
 Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg
 75 80
 Lys Arg His Thr Lys Ile His Leu Arg Gln
 85 90
 Lys Asp

<210> (2) INFORMATION FOR SEQ ID NO: 3:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 26 base pairs
 <212> (B) TYPE: nucleic acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

TATGACTTGG ATGGGAGACC GCCTGG

<210> (2) INFORMATION FOR SEQ ID NO: 4:

<110> CHOO, Yen

KLUG, Aaron

SANCHEZ-GARCIA, Isidro

<120> BINDING PROTEINS FOR RECOGNITION OF DNA

<130> 8325-2001.30 (G1-US3)

<140> 10/033, 129

<141> 2001-12-27

50 <150> 08/793, 408

60 <151> 1997-06-02

<150> PCT/GB95/01949

<151> 1995-08-01

<160> 125

<170> Patent In version 3.2

<220>

<221> MISC - FEATURE

<222> (48) ... (51)

<223> Xaa = any amino acid

<220>

<221> MISC - FEATURE

<222> (53) ... (54)

<223> Xaa = any amino acid

<220>

<221> MISC - FEATURE

<222> (56) ... (56)

<223> Xaa = any amino acid

<220>

<221> MISC - FEATURE

<222> (57) ... (57)

<223> Xaa = Arg or Lys

-continued

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 28 base pairs
~~<212>~~ (B) TYPE: nucleic acid DNA
~~(C) STRANDEDNESS: single~~
~~(D) TOPOLOGY: linear~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

AATTCAGGC GGTCTCCCAT CCAAGTCA

28

<210> (2) INFORMATION FOR SEQ ID NO: 5:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 21 base pairs
~~<212>~~ (B) TYPE: nucleic acid DNA
~~(C) STRANDEDNESS: single~~
~~(D) TOPOLOGY: linear~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

TATATAGCGT GGGCGTATAT A

21

<210> (2) INFORMATION FOR SEQ ID NO: 6:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 24 base pairs
~~<212>~~ (B) TYPE: nucleic acid DNA
~~(C) STRANDEDNESS: single~~
~~(D) TOPOLOGY: linear~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

GCGTATATAC GCCCAGCTA TATA

24

<210> (2) INFORMATION FOR SEQ ID NO: 7:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 21 base pairs
~~<212>~~ (B) TYPE: nucleic acid DNA
~~(C) STRANDEDNESS: single~~
~~(D) TOPOLOGY: linear~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

TATATAGCGN NNGCGTATAT A

21

<210> (2) INFORMATION FOR SEQ ID NO: 8:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 24 base pairs
~~<212>~~ (B) TYPE: nucleic acid DNA
~~(C) STRANDEDNESS: single~~
~~(D) TOPOLOGY: linear~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

GCGTATATAC GCNNCGCTA TATA

24

<210> (2) INFORMATION FOR SEQ ID NO: 9:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 33 base pairs
~~<212>~~ (B) TYPE: nucleic acid DNA
~~(C) STRANDEDNESS: single~~
~~(D) TOPOLOGY: linear~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

TTCCATGGAG ACGCAGAAGC CCTCAGCGG CCA

33

<210> (2) INFORMATION FOR SEQ ID NO: 10:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~<211>~~ (A) LENGTH: 33 base pairs

<220>

<221> misc-feature

<222> (10)... (12)

<223> it is a, c, g or t

<220>

<221> misc-feature

<222> (13)... (15)

<223> it is a, c, g or t

Q2127 (B) TYPE: nucleic acid DNA
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

TTCCATGGAG ACGCAGGTGA GTTCCTCACG CCA

33

~~(1) SEQUENCE CHARACTERISTICS:~~

(211) (A) ~~LENGTH: 33 base pairs~~
(212) (B) ~~TYPE: nucleic acid~~ DNA
(C) ~~STRANDEDNESS: single~~
(D) ~~TOPOLOGY: linear~~

CCCTTTCTC TTCCAGAAGC CCTTCAGCGG CCA

33

~~(1) SEQUENCE CHARACTERISTICS:~~

(21) (A) LENGTH: 33-amino-acids
(22) (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(11) MOLECULE TYPE: peptide~~

Met Ala Glu Glu Lys Pro Phe Gln Cys Arg
5 10

Ile Cys Met Arg Asn Phe Ser Asp Arg Ser
15 20

Ser Leu Thr Arg His Thr Arg His Thr Gly
25 30

Glu Lys Pro

~~(i) SEQUENCE CHARACTERISTICS:~~

(212) (A) LENGTH: 33 ~~amino acids~~
(212) (B) TYPE: ~~amino acid~~ PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

Met Ala Glu Glu Lys Pro Phe Gln Cys Arg
5 10

Ile Cys Met Arg Asn Phe Ser Glu Arg Gly
15 20

Thr Leu Ala Arg His Glu Lys His Thr Gly
25 30

Glu Lys Pro

~~(1) SEQUENCE CHARACTERISTICS:~~

2112 (A) LENGTH: 27-amino acids
2122 (B) TYPE: amino acid PRT
 (C) STRANDEDNESS: 1
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

-continued

<400> (wi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Phe Gln Cys Arg Ile Cys Met Arg Asn Phe
 5 10

Ser Gln Gly Gly Asn Leu Val Arg His Leu
 15 20

Arg His Thr Gly Glu Lys Pro
 25

<210> (2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 26 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (wi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

Phe Gln Cys Arg Ile Cys Met Arg Asn Phe
 5 10

Ser Gln Ala Gln Thr Leu Gln Arg His Leu
 15 20

Lys His Thr Gly Glu Lys
 25

<210> (2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 26 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (wi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

Phe Gln Cys Arg Ile Cys Met Arg Asn Phe
 5 10

Ser Gln Ala Ala Thr Leu Gln Arg His Leu
 15 20

Lys His Thr Gly Glu Lys
 25

<210> (2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 26 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (wi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

Phe Gln Cys Arg Ile Cys Met Arg Asn Phe
 5 10

Ser Gln Ala Gln Asp Leu Gln Arg His Leu
 15 20

Lys His Thr Gly Glu Lys
 25

<210> (2) INFORMATION FOR SEQ ID NO: 18:

-continued

~~(1) SEQUENCE CHARACTERISTICS:~~
~~(A) LENGTH: 89 amino-acids~~
~~(B) TYPE: amino-acid~~ PRT
~~(C) STRANDEDNESS:~~
~~(D) TOPOLOGY: unknown~~

~~(11) MOLECULE TYPE: protein~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

```

Met Ala Glu Glu Lys Pro Phe Gln Cys Arg
      5                      10
Ile Cys Met Arg Asn Phe Ser Asp Arg Ser
      15                      20
Ser Leu Thr Arg His Thr Arg Thr His Thr
      25                      30
Gly Glu Lys Pro Phe Gln Cys Arg Ile Cys
      35                      40
Met Arg Asn Phe Ser Asp Arg Ser His Leu
      45                      50
Thr Arg His Thr Arg Thr His Thr Gly Glu
      55                      60
Lys Pro Phe Gln Cys Arg Ile Cys Met Arg
      65                      70
Asn Phe Ser Asp Arg Ser Asn Leu Thr Arg
      75                      80
His Thr Arg Thr His Thr Gly Glu Lys
      85

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<210> (2) INFORMATION FOR SEQ ID NO: 19:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~(A) LENGTH: 10 amino-acids~~
~~(B) TYPE: amino-acid~~ PRT
~~(C) STRANDEDNESS:~~
~~(D) TOPOLOGY: unknown~~

~~(11) MOLECULE TYPE: peptide~~

~~(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:~~

```

Arg Ser Asp His Leu Thr Thr His Ile Arg
      5                      10

```

<210> (2) INFORMATION FOR SEQ ID NO: 20:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~(A) LENGTH: 10 amino-acids~~
~~(B) TYPE: amino-acid~~ PRT
~~(C) STRANDEDNESS:~~
~~(D) TOPOLOGY: unknown~~

~~(11) MOLECULE TYPE: peptide~~

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

```

Arg Val Asp Ala Leu Glu Ala His Arg Arg
      5                      10

```

<210> (2) INFORMATION FOR SEQ ID NO: 21:

~~(1) SEQUENCE CHARACTERISTICS:~~
~~(A) LENGTH: 10 amino-acids~~
~~(B) TYPE: amino-acid~~ PRT
~~(C) STRANDEDNESS:~~
~~(D) TOPOLOGY: unknown~~

~~(11) MOLECULE TYPE: peptide~~

-continued

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

Gln Arg Ala Ser Leu Ala Ser His Met Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

Asn Arg Asp Thr Leu Thr Arg His Ser Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

Gln Lys Gly His Leu Thr Glu His Arg Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

Gln Ser Val His Leu Gln Ser His Ser Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

Arg Leu Asp Gly Leu Arg Thr His Leu Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

Thr Pro Gly Asn Leu Thr Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

Asn Gly Gly Asn Leu Gly Arg His Met Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

Arg Ala Asp Ala Leu Met Val His Lys Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

Asn Gln Ser Asn Leu Glu Arg His His Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

Asp Arg Ser Asn Leu Glu Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

Arg Ser Asp Thr Leu Lys Lys His Gly Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 32:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

PRT

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

Gln Gln Ser Asn Leu Val Arg His Gln Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 33:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

PRT

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

Asn Gly Ala Asn Leu Glu Arg His Arg Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 34:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

PRT

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

Arg Glu Asp Ala Leu Thr Ser His Glu Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 35:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

PRT

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

Arg Gly Asp His Leu Lys Asp His Ile Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 36:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

PRT

(11) MOLECULE TYPE: peptide

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<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

Arg Gly Pro Asp Leu Ala Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

Arg Glu Asp Val Leu Ile Arg His Gly Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

Arg Ser Asp Leu Leu Gln Arg His His Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

Arg Gln Asp Thr Leu Val Gly His Glu Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

Arg Ala Ala Asp Leu Asn Arg His Val Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

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<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 46:Arg Arg Asp Val Leu Met Asn His Ile Arg
5 10<210> (2) INFORMATION FOR SEQ ID NO: 47:(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 47:Gln Gly Gly Asn Leu Val Arg His Leu Arg
5 10<210> (2) INFORMATION FOR SEQ ID NO: 48:(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 48:Ser Arg Asp Val Leu Arg Arg His Asn Arg
5 10<210> (2) INFORMATION FOR SEQ ID NO: 49:(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 49:Glu Lys Ala Thr Leu Ala Arg His Met Lys
5 10<210> (2) INFORMATION FOR SEQ ID NO: 50:(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids PRT
<212> (B) TYPE: amino acid
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 50:Gln Ala Gln Thr Leu Gln Arg His Leu Lys
5 10<210> (2) INFORMATION FOR SEQ ID NO: 51:(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

~~(*) SEQUENCE DESCRIPTION: SEQ ID NO: 51:~~

~~2/07~~ (2) INFORMATION FOR SEQ ID NO. 52:

~~4007 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:~~

~~<2/0> (2) INFORMATION FOR SEQ ID NO: 53:~~

~~14007 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:~~

2107 ~~(2) INFORMATION FOR SEO ID NO: 54:~~

~~(400) (ni) SEQUENCE DESCRIPTION. SEQ ID NO: 54:~~

~~(2) INFORMATION FOR SEQ ID NO: 55:~~

~~(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:~~

~~<210> (2) INFORMATION FOR SEQ ID NO: 56:~~

(4) SEQUENCE CHARACTERISTICS:
 (i) LENGTH: 10 amino acids
 (ii) TYPE: amino acid
 (iii) STRANDEDNESS:
 (iv) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

~~(400) (X1) SEQUENCE DESCRIPTION: SEQ ID NO: 56:~~

~~210~~ (2) ~~INFORMATION FOR SBQ ID NO. 57:~~

~~(11) MOLECULE TYPE: peptide.~~

~~2400~~ (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

~~(2) INFORMATION FOR SEQ ID NO:~~ 58:

~~(11) MOLECULE TYPE: peptide~~

44007 ~~(*) SEQUENCE DESCRIPTION: SEQ ID NO: 58:~~

~~<2/0> (2) INFORMATION FOR SEQ ID NO: 59:~~

~~(ii) MOLECULE TYPE: peptide~~

✓ 4400 > ~~(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:~~

~~<2/0> (2) INFORMATION FOR SEQ ID NO: 60:~~

(ii) MOLECULE TYPE: peptide

~~<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 60:~~

210 ~~(2) INFORMATION FOR SEQ ID NO: 61:~~

~~(ii) MOLECULE TYPE: peptide~~

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

Ile Ala Ser Asn Leu Leu Arg His Gln Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 62:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

Asp Arg Ser Asn Leu Glu Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 63:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

Asn Gln Ser Asn Leu Glu Arg His His Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 64:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

Gln Gln Ser Asn Leu Val Arg His Gln Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 65:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

Asn Gly Gly Asn Leu Gly Arg His Met Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 66:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

-continued

~~4400~~ (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

Asn Gly Ala Asn Leu Glu Arg His Arg Arg
5 10

~~210~~ ~~(2) INFORMATION FOR SEQ ID NO. 67:~~

~~(1) SEQUENCE CHARACTERISTICS:~~
~~(21) (A) LENGTH: 10 amino acids~~
~~(22) (B) TYPE: amino acid~~ PRT
~~(C) STRANDEDNESS:~~
~~(D) TOPOLOGY: unknown~~

~~(1) MOLECULE TYPE: peptide~~

~~<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 67:~~

Ser Gln Gly Asn Leu Gln Arg His Gly Arg
5 10

~~210~~ ~~(2) INFORMATION FOR SEQ ID NO. 68:~~

~~211~~ SEQUENCE CHARACTERISTICS
~~212~~ (A) LENGTH: 10 amino acids
~~213~~ (B) TYPE: amino acid PRT
~~214~~ (C) STRANDEDNESS:
~~215~~ (D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

~~<400> (*) SEQUENCE DESCRIPTION: GBQ ID NO: 68:~~

Ser His Pro Asn Leu Asn Arg His Leu Lys
5 10

~~<210> (2) INFORMATION FOR SEQ ID NO. 69:~~

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(11) MOLECULE TYPE: peptide~~

~~<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:~~

Thr Pro Gly Asn Leu Thr Arg His Gly Arg
5 10

~~<2/0> (2) INFORMATION FOR SEQ ID NO. 70:~~

(i) ~~SEQUENCE CHARACTERISTICS:-~~
 (A) ~~LENGTH: 10 amino acids-~~
 (B) ~~TYPE: amino acid~~ PRT
 (C) ~~STRANDEDNESS:~~
 (D) ~~TOPOLOGY: unknown~~

~~(11) MOLECULE TYPE: peptide~~

~~400~~ (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

Asp Arg Ser Asn Leu Glu Arg His Thr Arg
5 10

~~210~~ ~~(2) INFORMATION FOR SEQ ID NO: 71:~~

SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(11)-MOLECULE TYPE: peptide.~~

~~(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:~~

~~2102~~ (2) INFORMATION FOR SEQ ID NO: 72:

~~(11) MOLECULE TYPE: peptide~~

~~<400> (X1) SEQUENCE DESCRIPTION: SEQ ID NO: 721~~

~~<210> (2) INFORMATION FOR SEQ ID NO: 73:~~

(1) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

PRT

~~(11) MOLECULE TYPE: peptide~~

~~<400> (K1) SEQUENCE DESCRIPTION: SEQ ID NO: 73:~~

Glu Arg Gly Thr Leu Ala Arg His Glu Lys
5 10

~~(2) INFORMATION FOR SEQ ID NO. 74:~~

(1) SEQUENCE CHARACTERISTICS:

(211) (A) LENGTH: 10 amino acids

(212) (B) TYPE: amino acid

(213) (C) STRANDEDNESS:

(214) (D) TOPOLOGY: unknown

PRT

~~(11) MOLECULE TYPE: peptide.~~

~~<400> (x1) SEQUENCE DESCRIPTION: GSEQ ID NO. 74:~~

Asp Arg Arg Leu Leu Asp Arg His Gln Arg
5 10

~~(2) INFORMATION FOR SEQ ID NO: 75:~~

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(11) MOLECULE TYPE: peptide~~

4400 ~~(#1) SEQUENCE DESCRIPTION: SEQ ID NO: 75:~~

Asp Arg Ser Ser Leu Thr Arg His Thr Arg
5 10

~~210~~ ~~(2) INFORMATION FOR SEQ ID NO: 76:~~

(1) SEQUENCE CHARACTERISTICS:
211> (A) LENGTH: 10 amino acids
212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(11) MOLECULE TYPE: peptide~~

-continued

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

Glu Arg Thr Ser Leu Ser Arg His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 77:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

Ser Ala Gly Thr Leu Val Arg His Ser Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 78:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

Gln Ala Gln Thr Leu Gln Arg His Leu Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 79:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

Glu Lys Ala Thr Leu Ala Arg His Met Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 80:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

Thr Gly Gly Ser Leu Ala Arg His Glu Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 81:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (vi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

Arg Gln Ser Thr Leu Gly Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 82:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (vi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

Glu Lys Ala Thr Leu Ala Arg His Met Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 83:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (vi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

Gln Ala Gln Thr Leu Gln Arg His Leu Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 84:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (vi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

Glu Arg Gly Thr Leu Ala Arg His Glu Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 85:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (vi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

Gly Arg Asp Ala Leu Ala Arg His Gln Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 86:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Arg Gly Pro Asp Leu Ala Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 87:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

Ser Arg Asp Val Leu Arg Arg His Asn Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 88:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

Arg Arg Asp Val Leu Met Asn His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 89:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

Arg Lys Asp Val Leu Val Ser His Val Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 90:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

Arg Arg Asp Val Leu Met Asn His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 91:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

Arg Glu Asp Ala Leu Thr Ser His Glu Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 92:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

Arg Val Asp Ala Leu Glu Ala His Arg Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 93:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

Asp Arg Ser Ser Leu Thr Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 94:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Glu Arg Thr Ser Leu Ser Arg His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

Gly Ala Arg Ser Leu Thr Arg His Gln Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 96:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

$\langle 400 \rangle$

Arg Ala Asp Ala Leu Met Val His Lys Arg
5 10

 $\langle 210 \rangle$

~~(1) SEQUENCE CHARACTERISTICS:~~

2112
2122 (A) LENGTH: 10 amino acids
(B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(11) MOLECULE TYPE: peptide~~

2400

Arg Gln Asp Thr Leu Val Gly His Glu Arg
5 10

< 210 >

~~(1) SEQUENCE CHARACTERISTICS:~~

Q11 (A) LENGTH: 10 amino acids
Q12 (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(11) MOLECULE TYPE: peptide~~

$\langle 400 \rangle$

Arg Gln Ser Thr Leu Val Arg His Thr Arg
5 10

<210>

~~(1) SEQUENCE CHARACTERISTICS:~~

<211> (A) LENGTH: 10-amino-acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

2490

Arg Ala Ala Asp Leu Asn Arg His Val Arg
5 10

210

~~(1) SEQUENCE CHARACTERISTICS:~~

(211) ~~(A) LENGTH: 10 amino acids~~

(212) ~~(B) TYPE: amino acid~~ **PRT**

~~(C) STRANDEDNESS:~~

~~(D) TOPOLOGY: unknown~~

~~(11) MOLECULE TYPE: peptide~~

<400>

Arg Lys Asp Val Leu Val Ser His Val Arg
5 10

2210

~~(d) SEQUENCE CHARACTERISTICS~~

~~(211) (A) LENGTH: 10 amino acids~~
~~(212) (B) TYPE: amino acid~~ PRT
~~(C) STRANDEDNESS:~~
~~(D) TOPOLOGY: unknown~~

~~(ii) MOLECULE TYPE: peptide~~

-continued

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

Arg Arg Asp Val Leu Met Asn His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 107:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

Arg Ser Asp Thr Leu Lys Lys His Gly Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 108:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

Arg Gly Pro Asp Leu Ala Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 109:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

Ala Arg Glu Val Leu Gln Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 110:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

Arg Glu Asp Val Leu Ile Arg His Gly Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 111:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

1400

Arg Ser Asp Leu Leu Gln Arg His His Lys
5 10

 $\langle 210 \rangle$

~~4.1. SEQUENCE CHARACTERISTICS:~~

Q112 (A) LENGTH: 10 amino acids
Q12 (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

24002

Arg Leu Asp Gly Leu Arg Thr His Leu Lys
5 10

<2/0>

~~(1) SEQUENCE CHARACTERISTICS~~

(A) LENGTH: 10 amino acids
 (B) TYPE: amino acid **PRT**
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

<400>

Arg Gly Asp Ala Leu Thr Ser His Glu Arg
5 10

<210>

~~(i) SEQUENCE CHARACTERISTICS:~~

2212 (A) LENGTH: 10 amino acids
2213 (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(1d) MOLECULE TYPE: peptide~~

2400

Arg Ala Asp Ala Leu Met Val His Lys Arg
5 10

$\langle 210 \rangle$

~~(i) SEQUENCE CHARACTERISTICS:~~

2112 (A) LENGTH: 10 amino acids
2125 (B) TYPE: amino acid PRI
(C) STRANDEDNESS: _____
(D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

<400>

Arg Val Asp Ala Leu Glu Ala His Arg Arg
5 10

<210>

~~(1) SEQUENCE CHARACTERISTIC~~

(212) (A) LENGTH: 10 amino acids
(212) (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

~~(ii) MOLECULE TYPE: peptide~~

-continued

400 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

Arg Arg Asp Val Leu Leu Asn His Ile Arg
 5 10

210 (2) INFORMATION FOR SEQ ID NO: 117:

(i) SEQUENCE CHARACTERISTICS:
211 (A) LENGTH: 10 amino acids
212 (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

400 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

Arg Glu Asp Val Leu Ile Arg His Gly Lys
 5 10

210 (2) INFORMATION FOR SEQ ID NO: 118:

(i) SEQUENCE CHARACTERISTICS:
211 (A) LENGTH: 10 amino acids
212 (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

400 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

Arg Ser Asp Leu Leu Gln Arg His His Lys
 5 10

210 (2) INFORMATION FOR SEQ ID NO: 119:

(i) SEQUENCE CHARACTERISTICS:
211 (A) LENGTH: 10 amino acids
212 (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

400 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

Lys Ala Ser Asn Leu Val Ser His Ile Arg
 5 10

210 (2) INFORMATION FOR SEQ ID NO: 120:

(i) SEQUENCE CHARACTERISTICS:
211 (A) LENGTH: 10 amino acids
212 (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

400 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

Leu Arg His Asn Leu Glu Thr His Met Arg
 5 10

210 (2) INFORMATION FOR SEQ ID NO: 121:

(i) SEQUENCE CHARACTERISTICS:
211 (A) LENGTH: 10 base pairs
212 (B) TYPE: nucleic acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

400 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

-continued

CGCAGAAGCC

10

<210> (2) INFORMATION FOR SEQ ID NO: 122:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 base-pairs<212> (B) TYPE: nucleic acid DNA

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

TCCAGAAGCC

10

<210> (2) INFORMATION FOR SEQ ID NO: 123:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 base-pairs<212> (B) TYPE: nucleic acid DNA

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

CGCAGGTGAG

10

<210> (2) INFORMATION FOR SEQ ID NO: 124:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 11 amino-acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(1) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 124:Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
5 10<210> (2) INFORMATION FOR SEQ ID NO: 125:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 7 amino-acids<212> (B) TYPE: amino acid PRT

(C) STRANDEDNESS:

(D) TOPOLOGY: unknown

(1) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

Pro Lys Lys Lys Arg Lys Val

We claim:

1. A library of DNA sequences, each sequence encoding a zinc finger polypeptide for display, the zinc finger polypeptide comprising at least one zinc finger having partially randomised allocation of amino acids, the partially randomised zinc finger having a random allocation of amino acids at positions -1, +2, +3 and +6 and at least one of positions +1, +5 or +8, position +1 being the first amino acid in the α -helix of the zinc finger.

2. A library according to claim 1, wherein the partially randomised zinc finger has random allocation of amino acids at each of positions +1, +5 and +8.

3. A library according to claim 1, wherein the encoded partially randomised zinc finger comprises the zinc finger of the Zif 268 polypeptide.

4. A library according to claim 1 as a fusion with a DNA sequence encoding the minor coat protein of bacteriophage fd.

5. A method of designing a zinc finger polypeptide for binding to a particular target DNA sequence, comprising the steps of:

55 comparing the binding to one or more DNA triplets of each of a plurality of zinc finger polypeptides having a partially randomized zinc finger, the zinc finger polypeptides being encoded by a library in accordance with claim 1; and

60 selecting those nucleic acid sequences encoding randomised zinc fingers which bind to the target DNA sequence.

6. A method of designing a zinc finger polypeptide for binding to a particular target DNA sequence, comprising the steps of:

screening against at least a portion of the target DNA sequence, a plurality of zinc finger polypeptides having

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